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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/769,974

02/02/2004

Dag Willen

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EXAMINER

CAZAN, LIVIUS RADU

ART UNIT

PAPER NUMBER

3729

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/769,974	<b>Applicant(s)</b> WILLEN, DAG	
	<b>Examiner</b> LIVIOUS R. CAZAN	<b>Art Unit</b> 3729	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The amendment filed on 2/28/2008 has been fully considered and made of record.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-9, 13, and 14** are rejected under 35 U.S.C. 102(b) as being anticipated by Klein (US3414662).

4. **Regarding claims 1-6, 8, 9, 13, and 14**, Klein discloses a superconducting cable having two 3-phase assemblies/groups (10, 110, Fig. 5) wherein each assembly has a phase conductor (11, 12, 13; 101, 102, 103, Fig. 5) and a neutral conductor (14, 104, Fig. 5). Such assemblies can be disposed within a cable so as to have a common electrically conductive screen (3, Figs. 3 and 4). The phases are insulated from each other by insulators (see Figs. 1-6), insulators also separating the phase assemblies, and insulation means (5, Figs. 1-4) surrounds each of the phases. The two 3-phase assemblies shown in Fig. 5 are coaxial, with each individual phase conductor of a particular phase in a separate coaxial layer. The 3-phase groups are arranged to form three flat phases. It is also possible to have a common insulator insulating the phases

from each other, such as 2, 2', 2" in Fig. 2 (with a proper number of insulators based on the number of phase conductors).

5. **Regarding claim 7**, Klein discloses an embodiment wherein the phase conductors are tubular, concentric, and separated by insulators, being disposed within a conduit. It is readily apparent that the same type of metal screen as shown in Fig. 3 could be used with this arrangement.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Klein.

8. To the extent Applicant disagrees that Klein anticipates claim 7, it still would have been obvious to one of ordinary skill in the art at the time the invention was made to form the duct or line housing the concentric conductors out of metal, for the same advantages as when applied to the cable of Fig. 3.

9. **Claims 9, 10, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein

10. **Regarding claim 9**, to the extent Applicant disagrees that Klein anticipates claim 9 since a feature from a different embodiment was used in the rejection, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the various features of Klein, since it is readily apparent that the main feature required by Klein is the particular conductor order, so as to minimize the resultant magnetic field around the cable, with all other features, such as particular arrangement

of insulating material or the choice of material for duct 3 are interchangeable features, that would be useful in various combinations and be applicable to any particular core (i.e. number of phases and phase groups). Therefore, it would have been obvious to form a cable as shown in Fig. 3 but having a core as shown in Fig. 5, with insulation disposed around and between the conductors as in Fig. 2.

11. **Regarding claims 10 and 15**, Klein discloses substantially the same invention as the Applicant, except for forming more than 10 or 100 phase groups.

12. It is readily apparent from Klein that the invention is not limited to any particular number of phases or phase groups, as Klein discusses polyphase arrangements (see col. 3, lns. 47-55).

At the time the invention was made, it would have been an obvious matter of engineering design choice to a person of ordinary skill in the art to apply this invention to conductors having more than 10 or more than 100 phase groups, because Applicant has not disclosed that these particular values provide an advantage, are used for a particular purpose, or solve a stated problem. Moreover, since the invention of Klein is applicable to polyphase circuits, one of skill in the art would have found it obvious to modify the invention of Klein as needed, based on the particular number of phases meant to be carried by the cable.

13. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Engelhardt (US6262375).**

14. Klein discloses substantially the same invention as the Applicant except for the screen being grounded (i.e. at 0 potential) and being superconductive.

15. Engelhardt teaches that this is known. See discussion regarding the grounded superconductive shield, in col. 2, lns 52-65.

16. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ such a shield in the cable of Klein, for the same advantages discussed by Engelhardt.

### ***Double Patenting***

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. **Claims 1-11 and 13-15** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6684486. The rejection is maintained. See the Office Action mailed on 10/31/2007.

#### ***Response to Arguments***

19. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection. The rejection of claim 4 under 34 U.S.C. 112, 2<sup>nd</sup> paragraph, is withdrawn. The rejection of claims 5 and 12 under 35 U.S.C. 112, 2nd paragraph has been overcome.

#### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIVIUS R. CAZAN whose telephone number is (571)272-8032. The examiner can normally be reached on M-T 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. Dexter Tugbang/  
Primary Examiner  
Art Unit 3729

/L. R. C./ 6/23/2008  
Examiner, Art Unit 3729